l: Krasheninnikov N-5 (1736-40) 1764 Kamchadal

7th. Sea calves' puppying time. 805

8th. Time when the tame deer bring forth their young.

9th. When the wild deer bring forth.

10th. Beginning of the fiſhery.

Their diviſion of time is pretty ſingular; they commonly divide our year into two, ſo that winter is one year, and ſummer another: the ſummer year begins in *May*, and the winter in *November*.

They do not diſtinguiſh the days by any particular appellation, nor form them into weeks or months, nor yet know how many days are in the month or year. They mark their epochs by ſome remarkable thing or other, ſuch as the arrival of the *Ruſſians*, the great rebellion, or the firſt expedition to *Kamtſchatka*. They 212 have no writings, nor hieroglyphick figures, to preſerve the memory of any thing; ſo that all their knowledge depends upon tradition, which ſoon becomes uncertain and fabulous in regard to what is long paſt.

They are ignorant of the cauſes of eclipſes, but when they 821 happen, they carry fire out of their huts, and pray the luminary eclipſed to ſhine as formerly. They know only three conſtellations; the Great Bear, the Pleiades, and the three ſtars in Orion; and give names only to the principal winds.

Their laws in general tend to give ſatisfaction to the injured 681 perſon. If any one kills another, he is to be killed by the rela- 754 tions of the perſon ſlain. They burn the hands of people who have been frequently caught in theft, but for the firſt offence the thief muſt reſtore what he hath ſtolen, and live alone in ſolitude, without expecting any aſſiſtance from others. They think they can puniſh an undiſcovered theft by burning the ſinews of the ſtone-buck in a publick meeting with great ceremonies of conjuration, believing that as theſe ſinews are contracted by the fire ſo the thief will have all his limbs contracted.

27: Sauer--303-304 T-2 (1789-93) 1802 Kamchadal-1-2
116, 133, 134, 137, 782, 821

"Hot springs are very numerous, and seem scattered all over Kamtshatka; but those in the following places are the most remarkable:

Opalski, or Osernoi, situated nearly midway between the Lopatka and Bolshoiretsk, about 15 miles south of the Kamtshadal village of Yavinsk, surrounded by mountains, and at no great distance from the volcano of Opalsk. They occupy a valley of considerable extent, and are scattered to the distance of six miles, some parts of which produce detached birch trees, the sweet plant, &c.; but in general the soil is barren, composed of different coloured marl, and large stones which appear to have been scattered by eruptions of some volcano. The largest hot spring is at the foot of one of the mountains; and we heard the noise that it made at the distance of near a mile before we came to it. It is about six fathom in circumference, boiling up to a considerable height; the middle appears like a cauldron; and a piece of beef placed in it was very well boiled in a short time: all around it bubbles up between large stones; it then divides into two streams, which descend over stones, and unite at the bottom with a small rivulet formed by the other springs to the north: they flow a little way to the south, then turn westward into the lake Osernoi. About the border of these springs, and the rivulet which they form, we observed petrified, or rather calcarised, foliage of the sweet plant, birch leaves, sticks, &c. of a beautiful whiteness; but so extremely delicate in their texture, that we could not preserve any, even in cotton; for they mouldered to dust. The Kamtshadals suppose this to be the habitation of some demon, and make a

trifling offering to appease his wrath; without which, they say, he sends very dangerous storms. Our naturalist and Mr. Varonin, who ascended to these springs in 1790, experienced [304] a whirlwind, which tore their tent, and scattered its contents about, many of which were never found again. Ashes were scattered upon the snow about four inches deep, resembling coarse gunpowder, probably from the volcano Alaid (a solitary mountain in the sea, situated about 20 miles south-west of the Lopatka), which burns violently at this time(February 1793). It has at various intervals emitted smoke ever since 1790. The oldest inhabitant does not remember its having done so before, although tradition informs them of its violent eruptions."